ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Quality Division

1110 W. Washington Street ● Phoenix, AZ 85007 ● Phone: (602) 771-2316

MINOR PERMIT REVISION TO AIR QUALITY CONTROL PERMIT

(As required by Title 49, Chapter 3, Article 2, Section 49-426, Arizona Revised Statutes)

This air quality control permit does not relieve applicant of responsibility for meeting all air pollution regulations

1. PERMIT TO BE ISSUED TO (Business license name of organization that is to receive permit)

   Snowflake White Mountain Power, LLC

2. NAME (OR NAMES) OF OWNER OR PRINCIPALS DOING BUSINESS AS THE ABOVE ORGANIZATION

   Snowflake White Mountain Power, LLC

3. MAILING ADDRESS **3418 N. Val Vista Road**

   Mesa, AZ 85213

4. ORIGINAL EQUIPMENT LOCATION/ADDRESS **140 West of Snowflake, 277 Spur**

   Snowflake, Navajo County, AZ 85937

5. FACILITIES OR EQUIPMENT DESCRIPTION **Wood-fired electric generating facility**

6. THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING ***Conditions as described in attached***

7. ADEQ MINOR REVISION NUMBER **40012** PERMIT CLASS **I**

   MINOR REVISION ISSUED THIS _____ DAY OF _____, ***2006***

Nancy C. Wrona, Director, Air Quality Division

SIGNATURE TITLE

MINOR PERMIT REVISION DESCRIPTION

This minor permit revision for Snowflake White Mountain Power, LLC results in the following changes to Operating Permit No.: 36183:

1. Allows for the operation of the steam generating unit under 40 CFR 60 Subpart Db because the affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBtu/hour.

2. This change meets all of the requirements of the Minor Permit Revision rule, A.A.C. R18-2-319.A, for minor Class I revisions.

3. The changes to the boiler include: a) the water walls and the bubbling fluidized bed will be replaced with new materials (no increase in the heat input will occur), as will the air heater and convection section tubes, b) the steam and mud drums will be reused, as will most of the boiler peripherals, c) some additional soot blowers will be installed, d) an SNCR system will be installed for NO_x emission control and the existing CEMS is expected be used, and e) to account for the altitude effect, new fans will be installed.

4. No change in fuels, heat input or emissions will result from the internal changes to the boiler and no change in short and long term emissions limits is requested by the company.

5. Natural gas is to be used as a startup fuel only.

ATTACHMENT "B"

SPECIAL CONDITIONS

Addenda (Minor Revision) to Operating Permit No. 36183

for

Snowflake White Mountain Power, LLC

Condition II.B.1.d of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

II. FACILITY WIDE REQUIREMENTS

B. Operational Limitations and Standards

d. Supplemental Fuel [A.A.C. R18-2-306.A.2]

The Permittee shall burn only pipeline quality natural gas as a supplemental fuel, only during startup.

Condition II.C.7 of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

C. Recordkeeping and Reporting Requirements [A.A.C. R18-2-306.A.4] [A.A.C. R18-2-306.A.5]

7. At the time the compliance certifications required by Section VII of Attachment "A" are submitted, the Permittee shall submit reports of all monitoring, recordkeeping, and testing activities required by Attachment "B" performed during the compliance term.
[40 CFR 60.49b(i), (j), (w), and A.A.C. R18-2-306.A.5]

Conditions II.C.8, II.C.9, II.C.10, II.C.11, II.C.12, and II.C.13 of Attachment "B" of Operating Permit No.: 36183 have been added as follows:

C. Recordkeeping and Reporting Requirements

8. The Permittee shall submit excess emission reports for any excess emissions which occurred during the reporting period. [40 CFR 60.49b(h)]

9. All records required under this section shall be maintained by the Permittee of the affected facility for a period of 2 years following the date of such record. [40 CFR 60.49b(o)]

10. The Permittee shall submit to the Director the performance test data from the initial performance tests and the performance evaluations of the CEMS using the applicable performance specifications in appendix B in 40 CFR 60. [40 CFR 60.49b(b)]

11. The Permittee shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for natural gas, wood, and wood waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.
[40 CFR 60.49b(d)]

12. The annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum design heat input capacity.

[40 CFR 60.43b(e)]

13. The Permittee may submit electronic quarterly reports for SO_2, NO_X, or opacity in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the Director. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the Permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the Permittee shall coordinate with the Director to obtain an agreement to submit reports in this alternative format. [40 CFR 60.49b(v)]

Condition II.E of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

E. Notification Requirement [40 CFR 60.49b(a)(1) & (3)]

The Permittee shall submit notification of the date of initial startup as provided by 40 CFR 60.7. This notice shall include:

1. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility,

2. The annual capacity factor at which the Permittee anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

Condition II.F of Attachment "B" of Operating Permit No.: 36183 has been added as follows:

F. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-730.D, 40 CFR 60.43b(e), 60.49b(a)(1) & (3), 60.49b(b), 60.49b(d), 60.49b(h), 60.49b(i), 60.49b(j), 60.49b(o), 60.49b(v), and 60.49b(w).

Condition III.B.1 of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

III. BOILER REQUIREMENTS

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Particulate Matter

i. On or after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first, the Permittee shall not cause to be discharged into the atmosphere any gases that contain particulate matter emissions in excess of 0.030 lb/MMBtu heat input. [40 CFR 60.43b(h)(1)]

ii. The PM and opacity standards in Conditions III.B.1.a.i and III.B.1.b apply at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g)]

b. Opacity

The opacity of any plume or effluent shall not be greater than 20% on a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.
[40 CFR 60.43b(f) and A.A.C R18-2-331.A.3.f]

Conditions III.B.3.a and b of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

3. Monitoring, Record Keeping and Reporting Requirements

a. *The Permittee shall install, calibrate, maintain*, and operate *a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere from the boiler stack* and shall record the output of the system.
[40 CFR 60.48b(a), 60.49b(f) and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated with underline and italics]

b. The continuous opacity monitoring system shall meet the following requirements:

i. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous emission monitoring systems.
[40 CFR 60.48b(e)]

ii. The Span value of the opacity COMS shall be between 60 and 80 percent.
[40 CFR 60.48b(e)(1)]

Condition III.B.4 and 5 of Attachment "B" of Operating Permit No.: 36183 have been revised to read as follows:

4. Performance Testing Requirement

a. Within 180 days after startup, the Permittee shall conduct an initial performance test, as required under 40 CFR §60.8, for particulate matter and opacity from the boiler stack. Subsequent performance tests for particulate matter shall be conducted annually thereafter. [40 CFR 60.46b(d) and A.A.C. R18-2-312]

b. The Permittee shall conduct all particulate matter and opacity performance tests required in Condition III.B.3.a above in accordance with 40 CFR 60.46b(d). [40 CFR 60.46b(b)]

5. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.43b(f), 60.43b(g), 60.43b(h)(1), 60.48b(a), 60.48b(e), 60.49b(f).

Condition III.C.1 of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

C. Nitrogen Oxide (NO_x)

1. Emission Limitations/Standards

a. *The Permittee shall not cause to be discharged into the atmosphere from the boiler stack, including emissions generated during start-ups and shutdowns, NO_x emissions in excess of 240 tons per year on a 365 day rolling total.* [A.A.C. R18-2-306.A.2, -306.01, and -331.A.3.a]
[Material Permit Conditions are indicated with underline and italics]

b. On and after the date on which the initial performance test is completed or is required to be completed under 40 CFR 60.8, whichever date comes first, the Permittee shall not cause to be discharged into the atmosphere any gases that contain nitrogen oxides (expressed as NO_2) in excess of the following limit if the affected facility combusts

natural gas, or a mixture of this fuel with any other fuels: A limit of 0.20 lb/million Btu heat input. [40 CFR 60.44b(l)(1)]

c. The nitrogen dioxide standards in Condition III.C.1.b, applies during periods of startup. [40 CFR 60.44b(h)]

d. Compliance with the emission limits in Condition III.C.1.b is determined on a 30-day rolling average basis. [40 CFR 60.44b(i)]

Conditions III.C.3.a and b of Attachment "B" of Operating Permit No.: 36183 have been revised to read as follows:

3. Monitoring, Record Keeping, and Reporting Requirements

a. *The Permittee shall install, calibrate, maintain,* and operate *a continuous emission monitoring system (CEMS)*, and record the output of the system in ppmv and pounds per hour, *for measuring nitrogen oxides emissions discharged to the atmosphere from the boiler stack.* [40 CFR 60.48b(b)(1) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated with underline and italics]

b. Continuous Emission Monitoring System

i. The continuous monitoring systems required under Condition III.C.3.a of this Section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data shall be recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]

ii. The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by Condition III.C.3.a of this Section and required under 40 CFR 60.13(h) shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR §60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]

iii. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous emission monitoring systems. For facilities combusting natural gas, the span value for nitrogen oxides shall be 500 PPM. [40 CFR 60.48b(e)]

iv. When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7A, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(f)]

Condition III.C.3.e of Attachment "B" of Operating Permit No.: 36183 has been added as follows:

e. The Permittee shall maintain records of the following information for each steam generating unit operating day: [40 CFR 60.49b(g)]

i. Calendar date.

ii. The average hourly nitrogen oxides emission rates (expressed as NO_2) (lb/million Btu heat input) measured or predicted.

iii. The 30-day average nitrogen oxides emission rates (lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

iv. Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under 40 CFR §60.44b, a limit of 0.20 lb/million Btu heat input, with the reasons for such excess emissions as well as a description of corrective actions taken.

v. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

vi. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

vii. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

viii. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

ix. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

x. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.

Condition III.C.4 of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

4. Performance Testing Requirements

a. Compliance with the nitrogen oxides emission standards under Condition III.C.1.b through d of Attachment "B" shall be determined through performance testing under Condition III.C.4.b of this Section. [40 CFR 60.46b(c)]

b. To determine compliance with the emission limits for nitrogen oxides in Condition III.C.1.b through d of this Section, the Permittee shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring nitrogen oxides under 40 CFR §60.48(b).

i. For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards in Condition III.C.1.b through d of this Section. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

ii. Following the date on which the initial performance test is completed or is required to be completed under 40 CFR §60.8 of this part, whichever date comes first, the Permittee shall determine compliance with the nitrogen oxides standards

in Condition III.C.1.b through d on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(1) and 60.46b(e)(3)]

c. Within 180 days after startup, and annually thereafter, the Permittee shall conduct performance tests (as part of the RATA for the CEMS) for nitrogen oxide emissions from the boiler stack. [A.A.C. R18-2-312]

d. Subsequent performance tests for nitrogen oxide emissions being emitted from the boiler stack shall be conducted as required by the Director. [A.A.C. R18-2-312]

e. All performance testing for nitrogen oxide shall be conducted in accordance with EPA Reference Method 20. [A.A.C. R18-2-312]

Condition III.C.5 of Attachment "B" of Operating Permit No.: 36183 has been added as follows:

5. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.44b(h), 60.44b(i), 60.44b(l)(1), 60.46b(c), 60.46b(e)(1), 60.46b(e)(3), 60.48b(b)(1), 60.48b(c),60.48b(d), 40 CFR 60.48b(e), 60.48b(f), and 60.49b(g).

Condition III.D of Attachment "B" of Operating Permit No.: 36183 has been revised to read as follows:

D. Carbon Monoxide (CO)

2. Monitoring, Recordkeeping, and Reporting Requirements

a. *The Permittee shall install, calibrate*, maintain, and operate a *continuous emission monitoring system (CEMS),* and record the output of the system in ppmv and pounds per hour, *for measuring emissions of CO from the boiler stack.*

[A.A.C. R18-2-306.01 and -331.A.3.c]
[Material permit condition is underlined and italicized]

ATTACHMENT "C"

SPECIAL CONDITIONS

Addenda (Minor Revision) to Operating Permit No. 36183

for

Snowflake White Mountain Power, LLC

The equipment list in Attachment "C" of Operating Permit No.: 36183 is hereby updated for the reconstruction of the steam generating unit (boiler):

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER or EQUIPMENT #	DATE OF MFG.
Boiler	340 MMBtu	Babcock and Wilcox	2 drum BFB	Not available	Rebuilt 2006